

CLAIMS

1. Apparatus comprising a normally closed valve element that can be mounted on a mobile part and fluid distributor means that can be mounted on a stationary part and is operatively connectable with said valve element.
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2. Apparatus according to claim 1 wherein said valve element comprises:
 - a bell-body provided with a bottom part and an opening which can be closed with a closing element,
 - 10 — elastic means interposed between said closing element and said bottom part, said elastic means being suitable for maintaining said closing element in a configuration in which said opening is closed,
 - 15 — a pipe passing through said bottom part of said body for connecting said body to a fluid-dynamic device,
 - collar means radially protruding from the inner part of said opening and suitable for being in contact with and limiting said closing element,
 - 20 — seal means interposed between said closing element and said collar.
3. Apparatus according to claim 1 or 2, wherein said distributor means comprises:
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 - a container sealing body provided with at least three fluid inlets placed in order,
 - a chamber axially provided inside said container sealing body,
 - a slider that is arranged for axially sliding in said chamber and that is moved by first drive and return means, and that is provided with a front outlet,
 - 30 — a stem element slidably mounted in a corresponding seat provided in said slider, which is moved by

second drive and return means so as, so as to partially protrude from said slider through said opening.

4. Apparatus according to claim 3, wherein said slider
5 is provided with at least a transversal inlet which can be alternatively coupled and uncoupled with one of the three fluid inlets and which can be connected through a pipe section obtained in the slider to said front outlet.
- 10 5. Apparatus according to claim 4, wherein said transversal inlet is configured as an annular groove.
6. Apparatus according to claim any one of claims 3 to
15 5, wherein said three fluid inlets comprise a first fluid inlet and a second fluid inlet arranged for allowing the inlet of the fluid used for activating a fluid-dynamic device and a third fluid inlet arranged for allowing the inlet of the fluid used for deactivating a fluid-dynamic device.
7. Apparatus according to claim 6, wherein said first
20 fluid inlet and said second fluid inlet can be supplied essentially simultaneously and said third fluid inlet can be supplied in place of said first fluid inlet and said second fluid inlet.
8. Apparatus according to claim 6 or 7, wherein said first fluid inlet can be coupled with said transversal inlet.
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9. Apparatus according to any one of claims 2 to 8,
30 wherein said front fluid outlet is externally provided with further seal means so arranged as to abutting against said collar.
10. Apparatus according to claim 3, wherein annular seal means are provided between said chamber and said slider and between said seat and said stem element.
11. Apparatus comprising a stationary part and a mobile

part, at least a normally-closed valve element that can be mounted on said mobile part, distributor means that can be coupled with or uncoupled from said valve element, a deactivation element for deactivating fluid-dynamic devices acting on said valve element in alternation with said distributor means.

- 5 12. Apparatus according to claim 11, wherein said valve element comprises:

10 — a bell-shaped body provided with an opening for fluid inlet which can be closed with a stem element provided with an enlarged head,

15 — elastic means interposed between said stem element and a bottom part of the body suitable for maintaining said stem element in a configuration in which said enlarged head closes said opening,

20 — a pipe passing through said bottom part to connect said body with said fluid-dynamic device,

— a collar centripetally protruding from said opening, and on which abuts and which limits said stem element,

— seal means interposed between said enlarged head and said collar.

- 25 13. Apparatus according to claim 11 or 12, wherein said distributor means comprises:

— a container sealing body provided with at least two fluid inlets placed in order,

— a chamber axially provided inside said container sealing body,

30 — a slider arranged into said chamber so as to slide in said chamber, and provided with a front fluid outlet and a rod arranged for seal-coupling said slider with said valve element,

— first elastic means and return contrast means interposed between said slider and said chamber,

- a pipe section for the passage of fluid, provided into said rod and flowing into said front outlet,
 - a transverse inlet, which can alternatively coupled with a fluid inlet and which can be connected with said pipe section.
- 5 14. Apparatus according to claim 1, wherein said transverse inlet is configured as an annular groove.
- 10 15. Apparatus according to any one of claims 11 to 14, wherein said front fluid outlet is peripherally provided further seal means which can be placed in contact with said collar.
- 15 16. Apparatus according to claim 13, wherein said elastic means comprises a helical compression spring placed between said slider and said chamber.
18. 17. Apparatus according to claim 13, wherein said elastic means comprises double-acting actuating means connected to said slider.
- 20 18. Apparatus according to claim 11, wherein said deactivation means comprises:
 - at least thrusting means for thrusting by contact said stem element toward said body,
 - an alternate motion actuator for actuating said thrusting means toward and away from said stem element.
- 25 19. Apparatus according to claim 18, wherein said thrusting element is transversally positioned in relation with said stem element.
- 30 20. Apparatus according to claim 18 or 19, wherein said thrusting element comprises a wedge-shaped element mounted integrally on said alternate motion actuator provided with at least an oblique face turned toward said stem element to maintain a sliding contact with said stem element.